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### Therapeutic interventions in shock

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## **Therapeutic Interventions in Shock**

### Responses of the (Microvascular) Endothelium

1. Changes in blood flow during shock and resuscitation lead to disturbance of microvascular shear stress which *in vitro* contributes to the pro-inflammatory responses of endothelial cells (*This thesis*).
2. Based on their anti-inflammatory effects, histone deacetylase (HDAC) and nuclear factor- $\kappa$ B (NF- $\kappa$ B) are important targets to be followed up in future studies of therapeutic intervention in hemorrhagic shock/resuscitation (*This thesis*).
3. SAINT-C18 based liposomes (SAINT-O-Somes) are a kind of drug delivery system suitable for therapeutic intervention, however the delivery of the drugs into targeted (endothelial) cells *in vivo* needs to be proven (*This thesis*).
4. Reproducing the physiological microenvironment of blood vessels *in vitro* is impossible, therefore the investigation of endothelial responses to changes in their environment needs *in vivo* studies (*This thesis*).
5. Microvascular endothelial cells are highly sensitive and responsive to alterations in the local extracellular environment (*Adapted from Aird W.C., Blood, 2003, 101:3765-3777*).
6. Although the active participation of the microvascular endothelial cells in the pathogenesis of hemorrhagic shock and sepsis makes them an attractive target for therapeutic interventions (*Aird W.C., Current Drug Targets, 2007, 8(4):501-507*), potential molecular targets in endothelial cells are rarely investigated *in vivo*.
7. There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle (*Albert Einstein*).
8. Try a little harder to be a little better (*Gordon B. Hinckley*).
9. You may not control all the events that happen to you, but you can decide not to be reduced by them (*Maya Angelou, excerpted from Letter to My Daughter*).
10. Strengthen self without stopping, and hold world with virtue (*Excerpted from The Yi King*). 天行健，君子以自强不息。地势坤，君子以厚德载物。《周易》